



37 CFR 1.501 INFORMATION DISCLOSURE CITATION IN A PATENT (Use several sheets if necessary)		Docket Number (Optional) 1011U-1		Patent Application Number 10/042,406				
		Applicant Sheehan, J., et al.						
		Issue Date		Group Art Unit 1645				
U. S. PATENT DOCUMENTS								
EXAMINER INITIAL	DOCUMENT NUMBER		DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE	
CJM ↓	6	3 9 1 5 5 9	5/21/2002	Brown et al.	435	6	5/2/2000	
	6	2 1 4 5 5 7	4/10/01	Barnes et al.	435	6	6/6/00	
	6	1 5 0 0 9 4	11/21/00	Maier et al.			5/23/97	
	6	2 3 1 8 1 2	5/15/01	Rothberg, et al.	422	68.1	5/28/99	
	6	0 0 7 2 3 1	12/28/99	Vijg, et al.	364	497	8/14/96	
FOREIGN PATENT DOCUMENTS								
	DOCUMENT NUMBER		DATE	COUNTRY	CLASS	SUBCLASS	Translation YES NO	
CJM ↓	9	9 1 1 8 2 3	3/11/99	WIPO	—	—		
		DE 10,062,566 A1	6/20/02	Germany	—	—	X	
OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)								
CJM ↓ V	/	Boehringer Mannheim, PCR Applications Manual, Boehringer Mannheim GmbH, Biochemica, Germany, pages 23, 27-53 and 109, 1995.						
	/	Newton, CR, PCR Essential Data, published by Wiley & Sons, Inc. New York, pages 3, 24, 25, 53, 72-86, 1995.						
	/	GORELENKOV, A., et al., "Set of Novel Tools for PCR Primer Design", <u>BioTechniques</u> 31(6):1326-1330 (2001)						
	/	PROUTSKI, V., et al., "Primer Master: a new program for the design and analysis of PCR primers", <u>Cabios</u> 12(3):253-255 (1996).						
	/	DOI, K., et al., "Greedy Algorithms for Finding a Small Set of Primers Satisfying Cover and Length Resolution Conditions in PCR Experiments", <u>Genome Informatics Series</u> 8:43-52 (1997).						
	/	PLASTERER, T., "Primerselect: Primer and Probe design", <u>Methods in Molecular Biology</u> 70:291-302 (1997).						
	/	PODOWSKI, R., et al., "MEDUSA: large scale automatic selection and visual assessment of PCR primer pairs", <u>Bioinformatics</u> 17(7): 656-657 (2001).						
/	KAMPKE, T., et al., "Efficient primer design algorithms", <u>Bioinformatics</u> 17(3):214-225 (2001).							
/	PESOLE, G., et al., "GeneUp: A Program to Select Short PCR Primer Pairs that Occur in Multiple Members of Sequence Lists", <u>BioTechniques</u> 25:112-123 (1998).							
EXAMINER		C. Ma / f			DATE CONSIDERED			July 21, 2003

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Substitute for form 1449A/PTO			Complete if Known		
INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(use as many sheets as necessary)</i>			Application Number	Not Yet Assigned	
			Filing Date		
			First Named Inventor	John B. Sheehan	
			Art Unit	N/A	
			Examiner Name	Not Yet Assigned	
Sheet	1	of	3	Attorney Docket Number	HO-P02296US1

U.S. PATENT DOCUMENTS					
Examiner Initials*	Cite No. ¹	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number-Kind Code ² (if known)			
C.M.	A	4,683,195	07-28-1987	Mullis et al.	
	B	4,683,202	07-28-1987	Mullis et al.	
	C	4,800,159	01-24-1989	Mullis et al.	
	D	4,965,188	10-23-1990	Mullis et al.	
	E	5,512,462	04-30-1996	Suzanne Cheng	

FOREIGN PATENT DOCUMENTS					
Examiner Initials*	Cite No. ¹	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Country Code ³ -Number ⁴ -Kind Code ⁵ (if known)			
		NONE			

Examiner Signature	C. Mullis	Date Considered	July 21, 2003
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¹ Applicant's unique citation designation number (optional). ² See attached Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the application number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶ Applicant is to place a check mark here if English language Translation is attached.

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Substitute for form 1449B/PTO		Complete if Known	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT (use as many sheets as necessary)		Application Number	Not Yet Assigned
		Filing Date	
		First Named Inventor	John B. Sheehan
		Group Art Unit	N/A
		Examiner Name	Not Yet Assigned
		Attorney Docket Number	HO-P02296US1
Sheet	2	of	3

OTHER PRIOR ART – NON PATENT LITERATURE DOCUMENTS			
Examiner Initials	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
CJM	F	CORMEN, T.H. ET AL., <i>Contents - Introduction to Algorithms</i> , 1994, 10 pp., MIT	
	G	SANCHEZ, G. ET AL., <i>Relative amplification efficiency of differently sized templates by long-distance PCR</i> , BioTechniques, Mar. 1998, pp. 400-402, vol. 24, no. 3.	
	H	BARNES, W.M., <i>PCR amplification of up to 35-kb DNA with high fidelity and high yield from λ bacteriophage</i> , Proc. Natl. Acad. Sci. USA, Mar. 1994, pp. 2216-2220, vol. 91, Genetics	
	I	CHENG, S., ET AL., <i>Effective amplification of long targets from cloned inserts and human genomic DNA</i> , Proc. Natl. Acad. Sci. USA, Jun. 1994, pp. 5695-5699, vol. 91, Genetics	
CJM	J	COHEN, JON, <i>'Long PCR' leaps into larger DNA sequences</i> , SCIENCE, 03/18/94, pp. 1564-1565, vol. 263	
	K	Univ. of Washington Genome Center, 8 pp. printed 11/26/01 from www.genome.washington.edu .	
CJM	L	CHENG, S., ET AL., <i>Long PCR</i> , NATURE, 06/23/94, pp. 684-685, vol. 369.	
	M	ZHANG, L-H, ET AL., <i>Long-distance PCR-based strategy for preparing knock-in vectors directly from ES cell genomic DNA</i> , BioTechniques, Nov. 1998, pp. 784-788, vol. 25.	
	N	LOUKIANOV, E.V., ET AL., <i>Identification of targeted embryonic stem cells using long-distance PCR</i> , BioTechniques, Sept. 1997, pp. 376-380, vol. 23.	
	O	TAYLOR, G.R., ET AL., <i>The polymerase chain reaction: from functional genomics to high-school practical classes</i> , Current Opinion in Biotechnology, 1998, pp. 35-42, vol. 9, Current Biology Ltd.	
	P	MIN, G-S, ET AL., <i>Long-distance genome walking using the long and accurate polymerase chain reaction</i> , BioTechniques, 1998, pp. 398-399, vol. 24, no. 3.	
	Q	SOROKIN, A., ET AL., <i>A new approach using multiplex long accurate PCR & yeast artificial chromosomes for bacterial chromosome mapping & sequencing</i> , GENOME RESEARCH, 1996, pp. 448-453, vol. 6, Cold Spring Harbor Lab. Press.	
	R	OHYA, Y., <i>LA-PCR-based quick method for identification of genes responsible for complementation of saccharomyces cerevisiae mutations</i> , BioTechniques, May 1996, pp. 772-778, vol. 20, no. 5.	
	S	CHENG, S., ET AL., <i>XL PCR amplification of long targets from genomic DNA</i> , Methods in Molecular Biology, pp. 17-29, vol. 67: PCR Cloning Protocols: From Molecular Cloning to Genetic Engineering, Humana Press Inc.	
	T	FOORD, O.S., ET AL., <i>Long distance PCR</i> , PCR Methods & Applications, 1994, pp. S149-S161, vol. 3, Cold Spring Harbor Lab.	
	U	OHLE, L.D., ET AL., <i>Optimization of long-distance PCR using a transposon-based model system</i> , PCR Method & Applications, 1992, pp. 51-59, vol. 2, Cold Spring Harbor Lab. Press.	
	V	PONCE, M.R., ET AL., <i>PCR amplification of long DNA fragments</i> , Nucleic Acid Research, 1992, pp. 623, vol. 20, no. 3, Oxford Univ. Press.	
	W	LINDBERG, A.M., ET AL., <i>Amplification & cloning of complete enterovirus genomes by long distance PCR</i> , Journal of Virological Methods, 1997, pp. 191-199, vol. 65, Elsevier Science BV.	
	X	AKASAKA, T., ET AL., <i>Long distance polymerase chain reaction for detection of chromosome translocations in B-cell lymphoma/leukemia</i> , LEUKEMIA, APR. 1997, cover page & pp. 316-317, vol. 11, supp. 3.	
	Y	TAKITA, Y., ET AL., <i>Applications of long & accurate polymerase chain reaction method in yeast molecular biology: direct sequencing of amplified DNA and its introduction into yeast</i> , YEAST, 1997, pp. 763-768, vol. 13, John Wiley & Sons. Ltd.	
	Z	HENG, P.H., <i>Optimizing multiplex & LA-PCR with betaine, TiBS</i> , 1997, cover & pp. 225-226, 1997, vol. 22, Int'l. Union of Biochemistry & Elsevier Trends Journal.	
✓	AA	<i>Long-range PCR: synthesis of products independent of size</i> , TIG, Nov. 1996, cover & p. 458, vol. 12, no. 11	

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		Group Art Unit	N/A		
		Examiner Name	Not Yet Assigned		
Sheet	3	of	3	Attorney Docket Number	HO-P02296US1

CPM	AB	MAGA, E.A., ET AL., <i>Amplification of a 9.0-kb fragment using PCR</i> , BioTechniques, Jul. 1991, index & pp. 185-186, vol. 11, no. 1, Eaton Publishing Co.	
	AC	LAY, J.M., ET AL., <i>Rapid confirmation of gene targeting in embryonic stem cells using two long-range PCR techniques</i> , Transgenic Research, 1998, pp. 135-140, vol. 7, Chapman & Hall.	
	AD	LUTHRA, R., ET AL., <i>Mapping of genomic t(2;5)(p23;q35) break points . . .</i> , Hematopathology & Molecular Hematology, 1998, pp. 173-183, vol. 11 (3&4), Marcel Dekker, Inc.	
	AE	AKASAKA, T., ET AL., <i>Polymerase chain reaction amplification of long DNA targets . . .</i> , Int'l Journal of Oncology, 1998, pp. 113-121, vol. 12.	
CPM	AF	HENGEN, P.N., <i>Long and accurate PCR</i> , TIBS, 1994, cover & pp. 341-342, vol. 19, Int'l Union of Biochemistry & Elsevier Trends Journal.	
	AG	Rebase update, Genetic Information Research Institute, 2001, 4 pp. printed 11/26/01 from www.girinet.org.	
	AH	Virtual Genome Center info., Info. about xprimer, 4. pp. printed 11/26/01 from alics.med.umn.edu.	
	AI	Primer3, 5 pp. printed 11/26/01 from www.genome.wi.mit.edu.	
	AJ	Long PCR reagents & guidelines, 3 pp. printed 06/15/2000 from twod.med.harvard.edu.	
CPM	AK	Expand long template PCR system, Specification, ROCHE, Jun. 1999, 4 pp., vers. 3.	
	AJ	Expand long template PCR system, Specification, ROCHE, Sept. 1999, 5 pp., vers. 4.	
CPM	AK	Long-range PCR using the expand long template PCR kit, BOEHRINGER MANNHEIM, 2 pp.	
	AJ	Tools for data mining, NCBI GenBank, 4 pp. printed 11/26/01 from www.ncbi.nlm.nih.gov.	
	AK	Electronic PCR, NCBI GenBank, 2 pp. printed 11/26/01 from www.ncbi.nlm.nih.gov.	

Examiner Signature	C. Muller	Date Considered	July 21, 2003
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